WHAT IS CLAIMED IS:

1. Anode module (1) for a liquid-metal anode X-ray source which has an electron entry window (3) in the region of focus (2),

characterized in that

an X-ray beam exit window (4) lies opposite the electron entry window (3) and the exit angle (Θ) of the X-ray beams (7) between an electron beam (6) entering through the electron entry window (3) along the direction of incidence (5) and the X-ray beams (7) exiting through the X-ray beam exit window (4) is between 5° and 50°, in particular 15°.

2. Anode module (1) according to claim 1, characterized in that the electron exit window (3) is a metal foil, in particular of tungsten, from 5 to 30 μm, in particular 15 μm, thick, or a diamond film, a ceramic material or a monocrystal, in particular of cubic boron nitride.

3. Anode module (1) according to one of the previous claims, characterized in that the X-ray beam exit window (4) is a steel sheet from 100 to 400 μm, in particular 250 μm, thick.

4. Anode module (1) according to one of the previous claims, characterized in that in the region of focus (2) it is from 100 to 350 μm, in particular 200 μm, thick in the direction of the incident electron beam (6).

5. Anode module (1) according to one of the previous claims, characterized in that in the region of focus (2) it has a constricting channel (8) in the direction of the incident electron beam (6) and outside the region of focus (2) is from 5 to 10 mm, preferably 8 mm, thick.

6. Anode module (1) according to one of the previous claims, characterized in that the electron entry window (3) is convexly curved perpendicular to the direction of flow (9) of the liquid metal (10), in particular like part of a cylinder surface.

7. Anode module (1) according to one of the previous claims, characterized in that the X-ray beam exit window (4) is concavely curved perpendicular to the direction of flow (9) of the liquid metal (10), in particular like part of a cylinder surface.

8. Anode module (1) according to one of the previous claims, characterized in that the focus length is 2 to 8 mm, in particular 5 mm.

9. Anode module (1) according to one of the previous claims, characterized in that the effective focus size is 1 mm x 1,3 mm.

10. Anode module (1) according to one of the previous claims, characterized in that the region of focus (2) runs parallel to the Y-Z plane which stands perpendicular to the direction of flow (9) of the liquid metal (10).

11. Anode module (1) according to one of the previous claims, characterized in that the angle of incidence (α) between the direction of incidence (5) of the electron beam (6) and the Z-axis is between 5° and 65°, preferably 50°.

12. Anode module (1) according to one of the previous claims, characterized in that the anode angle (β) between the exit direction (12) of the X-ray beam (7) and the Y-axis is between 10° and 50°, preferably 20°.

13. Anode module (1) according to one of the previous claims, characterized in that the angle of incidence (α), the anode angle (β) and the exit angle (Θ) all lie in the Y-Z plane.

14. Anode module (1) according to one of the previous claims, characterized in that the relationship between the width (B) of the X-ray beam (7) and the height (H) of the X-ray beam (7) in the X-Z plane lies between 2 and 6, preferably 4.

15. X-radiator with an electron source for the emission of electrons and a liquid-metal anode emitting X-ray beams (7) when the electrons strike, which has an anode module (1) according to one of the previous claims.